APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/531,918	03/21/2000	David Scott Taubman	10990265-1	7309

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HEWLETT PACKARD COMPANY
P O BOX 272400, 3404 E. HARMONY ROAD
INTELLECTUAL PROPERTY ADMINISTRATION
FORT COLLINS, CO 80527-2400

EXAMINER
CHEN, WENPENG

ART UNIT	PAPER NUMBER
2624	

DATE MAILED: 12/06/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

	Application No.	Applicant(s)
Office Action Summary	09/531,918	TAUBMAN ET AL.
	Examiner	Art Unit
	Wenpeng Chen	2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 March 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____ .

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *2* .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: .

U.S. Patent and Trademark Office
PTO-326 (Rev. 04-01)   Office Action Summary   Part of Paper No. 3

Claim Objections

ok.

1.   Claims 1-6 are objected to because of the following informalities.

-- In Claim 1, the term "the tree" in line 9 refers to "a tree structured description" in line

6.

-- In Claim 3, the term "the tree" in line 9 refers to "a tree structured description" in line

6.

-- In Claim 4, the term "the tree" in line 9 refers to "a tree structured description" in line

6.

-- In Claim 6, the term "the tree" in line 9 refers to "a tree structured description" in line

6.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3.   Claims 7-8 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for the following reasons.

ok

There are insufficient antecedent bases for the following limitations.

-- Claim7 recites the limitation "the tree" in line 7.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed
in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by
another filed in the United States before the invention by the applicant for patent, except that an international application
filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed
in the United States only if the international application designated the United States and was published under Article
21(2) of such treaty in the English language.

5.   Claims 1-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Lei et al.

(US patent 6,356,665.)

Lei teaches a method and apparatus of coding the bit-planes of an array of numbers

comprising the steps of and the means for:

-- converting the values in the array of numbers to binary; (column 3, line 65 to column

4, line 17; Values represented by a series of binary bits.)

-- determining the number of bit-planes based on a number having the maximum absolute

value of the array of numbers; (column 5, lines 22-59)

-- generating a tree structured description of significance information for each bit-plane

of the array based on a modified quad-tree coding technique; (column 4, lines 36-48; column 5,

line 60 to column 6, line 14)

-- generating an SNR scalable encoding of the significance information for each bit plane

by describing new branches and leaves of the tree corresponding to each bit- plane in a bottom-

up-depth-first manner; (column 2, lines 46-53; column 4, lines 14-49; column 6, line 65 to

column 7, line 67; Figs. 5, 6A, 6B; When a block at a bit-plane level is decomposed into 4

subblocks at box 78 of Fig. 5, thus describing new branches and leaves of the tree. As described

with Figs. 6A and 6B, this action of description is same as those processes discussed in Figs. 5-8

of the present application. Therefore, this action of description is of a bottom-up-depth-first

manner. The passage in column 2, lines 46-53 indicates that coding process is an SNR scalable

encoding.)

     -- generating an encoding of refinement information for each bit-plane; (column 6, lines

4-52; Figs. 5, 6A, 6B; Refinement bits are generated for each bit-plane.)

     -- generating a SNR scalable description of the array by concatenating the encoding of

the significance information and the refinement information generated for each bit-plane;

(column 4, lines 56-65; Figs. 6A and 6B; column 6, line 65 to column 7, line 67; The encoded bit

streams are connected one bit-plane after one bit-plane in the order from the MSB to LSB.)

     -- truncating the binary values to a predetermined level of accuracy after the step of

converting. (column 4, lines 1-8)

     The apparatus is shown in Fig. 1.

     Lei teaches a computer coding system (Fig. 1) for an input image, the system having a

sampling filter which decomposes the input image into four frequency subbands and outputs a

Wavelet transform (column 3, lines 45-63; Fig. 8 clearly shows decomposing the input image

into four frequency subbands), the system comprising:

     -- an encoder which generates a SNR scalable description of the Wavelet transform by

concatenating an encoding of significance information and an encoding of refinement

information generated for each bit-plane, wherein the encoding of the significance information

for each bit-plane is generated by describing new branches and leaves of the tree corresponding

to each bit-plane in a bottom-up-depth-first manner; (Fig. 1; column 2, lines 46-53; column 4,

lines 14-49; column 6, line 65 to column 7, line 67; Figs. 5, 6A, 6B; column 4, lines 56-65; Figs.

6A and 6B; column 8, lines 53-67; When a block at a bit-plane level is decomposed into 4

subblocks at box 78 of Fig. 5, thus describing new branches and leaves of the tree. As described

with Figs. 6A and 6B, this action of description is same as those processes discussed in Figs. 5-8

of the present application. Therefore, this action of description is of a bottom-up-depth-first

manner. The passage in column 2, lines 46-53 indicates that coding process is an SNR scalable

encoding. The encoded bit streams are connected one bit-plane after one bit-plane in the order

from the MSB to LSB.)

-- a decoder which utilizes the SNR scalable description of the Wavelet transform to

produce an output image. (Fig. 1)

Conclusion

6.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Wenpeng Chen whose telephone number is 703 306-2796. The

examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, David K Moore can be reached on 703 308-7452. The fax phone numbers for the

organization where this application or proceeding is assigned are 703-872-9314 for regular
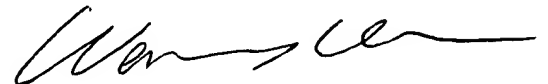
communications and 703-872-9314 for After Final communications. TC 2600's customer service

number is 703-306-0377.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is 703 305-4700.

Wenpeng Chen
Primary Examiner
Art Unit 2624

December 4, 2002